

AMENDMENTS TO THE CLAIMS

The following listing of claims shows the status of every claim that is, or ever was, in the instant application. This listing will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1 (Currently amended). A device for producing the flow of electrons due to solar energy being incident thereon comprising:

at least one solar cell photovoltaic substrate material; and

at least one means for modifying at least a portion of the photoreactive portion of the solar spectrum from sunlight, said at least one means being positioned between said at least one solar cell substrate material and incident sunlight, whereby said at least one means ~~permits limited energies of~~ restricts undesirable incident frequencies of light within the photoreactive portion of the solar spectrum ~~to pass therethrough so as to reduce negative interactions within said~~ from becoming incident upon the solar cell photovoltaic substrate material ~~relative to unfiltered incident sunlight.~~

2 (Previously presented). The device of claim 1, wherein at least one means for modifying at least a portion of the photoreactive portion of the solar spectrum from sunlight comprises at least one material.

3 (Previously presented). The device of claim 2, wherein said at least one material comprises at least one cover material which covers at least a portion of at least one surface of said at least one solar cell photovoltaic substrate material.

4 (Previously presented). The device of claim 1, wherein said at least one substrate material comprises at least one semiconductor material.

5 (Previously presented). The device of claim 4, wherein said at least one semiconductor material comprises at least one material selected from the group consisting of amorphous silicon, crystalline silicon and cadmium sulfide.

6 (Currently amended). The device of claim 1, wherein said at least one means for modifying at least a portion of the photoreactive portion of the solar spectrum from sunlight minimizes the amount of destructively interfering ~~wavelengths~~ frequencies of sunlight incident on said photovoltaic substrate material so as to reduce negative interactions within said solar cell photovoltaic substrate material relative to an unfiltered photoreactive portion of the solar spectrum.

7 (Currently amended). The device of claim 1, wherein said ~~limited energies of at least a portion of undesirable incident frequencies of light within~~ the photoreactive portion of the solar spectrum from sunlight correspond to at least one frequency which distinctly interferes with the flow of electrons ~~primary wavelength of light corresponding in energy to at least one primary band gap width in said photovoltaic substrate and at least some harmonics and at least some heterodynes of said at least one primary wavelength of light.~~

8 (Currently amended). The device of claim 7, wherein said at least one frequency ~~some harmonics~~ comprises substantially all harmonics ~~frequencies~~.

9 (Currently amended). The device of claim 7, wherein said at least one means for modifying some heterodynes comprises substantially all heterodynes at least one filter.

10 (Currently amended). The device of claim 1, wherein said undesirable incident frequencies of light within ~~limited energies of at least a portion of the photoreactive portion of the solar spectrum from sunlight~~ correspond to those frequencies which do not correspond to a primary band gap in said photovoltaic substrate ~~a plurality of primary frequencies of light which correspond in energy to at least one primary band gap width in said at least one solar cell photovoltaic substrate as well as a plurality of groups of frequencies of light which correspond to a plurality of harmonics and a plurality of heterodynes of said plurality of primary frequencies.~~

11 (Currently amended). The device of claim ~~[[10]]~~ 1, wherein said undesirable incident frequencies of light within the photoreactive portion of the solar spectrum ~~plurality of primary frequencies~~ correspond to frequencies other than those frequencies which are distributed substantially symmetrically about a primary frequency which corresponds to said at least one primary band gap width, said plurality of primary frequencies including substantially all of those frequencies which correspond to less than ~~at least~~ about one-half of the maximum amplitude associated with said primary frequency.

12 (Currently amended). The device of claim ~~[[10]]~~ 1, wherein said undesirable incident frequencies of light within the photoreactive portion of the solar spectrum ~~plurality of harmonics~~ correspond to frequencies other than those frequencies which are distributed substantially symmetrically about each harmonic frequency and which comprise those frequencies which correspond to at least about one-half of the maximum amplitude associated with each said harmonic frequency.

13 (Currently amended). The device of claim ~~[[10]]~~ 1, wherein said undesirable incident frequencies of light within the photoreactive portion of the solar spectrum ~~plurality of heterodynes~~ correspond to frequencies other than those frequencies which are distributed substantially

symmetrically about each heterodyne frequency and which comprise those frequencies which correspond to at least about one-half of the maximum amplitude associated with each said heterodyne frequency.

14 (Currently amended). A method of increasing the efficiency of a solar cell photovoltaic substrate material comprising:

determining at least one set of energies selected from the group of energies consisting of desirable energies and undesirable energies from at least a portion of the photoreactive portion of the solar spectrum from that can be applied to a solar cell photovoltaic substrate material to result in the promotion of electrons to a conduction band, said conduction band being an inherent characteristic of said solar cell material;

determining at least one means for filtering sunlight, such that said means for filtering reduces the amount of undesirable energies from at least a portion of the photoreactive portion of the solar spectrum from being incumbent on said solar cell material; and

combining said at least one substrate material and said at least one means for filtering sunlight together ~~in a solar cell~~ to restrict undesirable incident frequencies of light within said photoreactive portion from being incumbent upon the solar cell photovoltaic substrate.

15 (Currently amended). A method for determining ~~desirable~~ undesirable energies from at least a portion of the photoreactive portion of the solar spectrum ~~[[to be]]~~ from being incident on a solar cell photovoltaic substrate material comprising:

determining at least one primary band gap width present in ~~[[a]]~~ said solar cell substrate material;

determining at least one primary wavelength frequency of ~~[[a]]~~ light corresponding in energy to said at least one primary band gap width; and

determining at least one harmonic and at least one heterodyne of said at least one primary wavelength frequency of light, whereby at least some energies not corresponding to said determined at least one primary and said determined at least one harmonic and at least one heterodyne are to be restricted from being incumbent upon said solar cell photovoltaic substrate.

16 (Currently amended). The method of claim 15, wherein substantially all ~~desirable~~ undesirable harmonics and substantially all ~~desirable~~ undesirable heterodynes of said at least one primary wavelength of light are determined.

17 (New). The device of claim 1, wherein said photoreactive portion of the solar spectrum comprises from about 300 nanometers to about 1400 nanometers.

18 (New). The method of claim 14, wherein said photoreactive portion of the solar spectrum comprises from about 300 nanometers to about 1400 nanometers.

19 (New). The method of claim 15, wherein said photoreactive portion of the solar spectrum comprises from about 300 nanometers to about 1400 nanometers.

20 (New). The device of claim 14, wherein said undesirable incident frequencies of light within the photoreactive portion of the solar spectrum correspond to frequencies other than those frequencies which are distributed substantially symmetrically about a primary frequency which corresponds to said at least one primary band gap width, said plurality of primary frequencies including substantially all of those frequencies which correspond to less than about one-half of the maximum amplitude associated with said primary frequency.